

1/3

$$\begin{aligned}f_1(x_1(t), x_2(t), x_3(t), (x_1(t), x_2(t), x_3(t), p_1, p_2, p_3)) &= x_1(t) - x_2(t) - x_3(t), \\f_2(x_1(t), x_2(t), x_3(t), (x_1(t), x_2(t), x_3(t), p_1, p_2, p_3)) &= p_1 \cdot x_1(t) + p_2 \cdot x_3(t), \\f_3(x_1(t), x_2(t), x_3(t), (x_1(t), x_2(t), x_3(t), p_1, p_2, p_3)) &= p_3 \cdot x_2(t) - p_2 \cdot x_3(t),\end{aligned}$$

$$\underline{p} = \begin{pmatrix} p_1 \\ p_2 \\ p_3 \end{pmatrix}$$

FIG. 1

$$\underline{\underline{A}} = \begin{pmatrix} * & * & * \\ * & 0 & * \\ 0 & * & * \end{pmatrix}$$

FIG. 2

$$T = \{(1,1), (2,3), (3,2)\}$$

$$\begin{aligned} f_1(x_1(t), x_2(t), x_3(t), p_1, p_2, p_3) &= x_1(t) - x_2(t) - x_3(t), \\ f_2(x_1(t), x_2(t), x_3(t), p_1, p_2, p_3) &= p_2 \cdot x_3(t), \\ f_3(x_1(t), x_2(t), x_3(t), p_1, p_2, p_3) &= -p_2 \cdot x_3(t), \end{aligned}$$

$$\underline{p} = \begin{pmatrix} p_1 \\ p_2 \\ p_3 \end{pmatrix}$$

FIG. 3

$$\underline{A} = \begin{pmatrix} * & * & * \\ * & 0 & * \\ 0 & * & * \end{pmatrix}$$

$$T = \{(1,1), (2,3)\}$$

$$Z = \{\{2,3\}\}$$

$$S = \{\{1,2\}\}$$

FIG. 4

A row rank with the elements 2, 3 was found.

A column rank with the elements 1, 2 was found.

FIG. 5

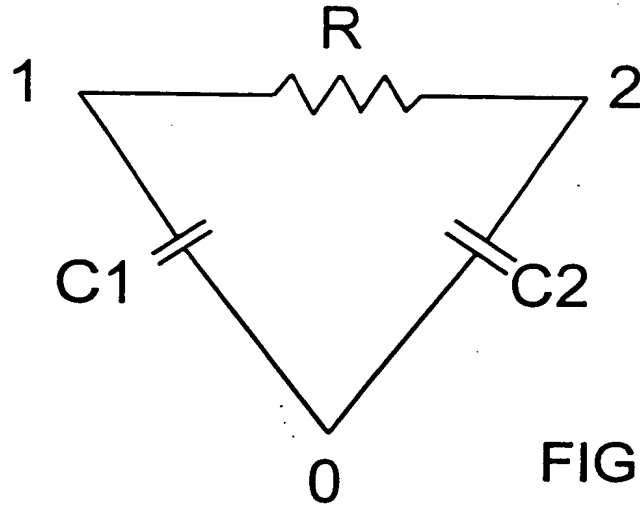


FIG. 6

$G =$ ("1: Kirchhoff voltage equation for the mesh comprising C1, R, C2"
 "2: Kirchhoff current equation for the node 1",
 "3: Kirchhoff current equation for the node 2")

$K =$ ("1: Voltage between nodes 1 and 0",
 "2: Voltage between nodes 2 and 0",
 "3: Voltage between nodes 1 and 2")

FIG. 7

A row rank having the elements
 "2: Kirchhoff current equation for the node 1",
 "3: Kirchhoff current equation for the node 2"
 was found.

A column rank having the elements
 "1: Voltage between nodes 1 and 0"
 "2: Voltage between nodes 2 and 0"
 was found.

FIG. 8